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Office of Electricity Delivery and Energy Reliability, OE-10  
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**RE: Comments to 2009 National Electric Transmission Congestion Study**

The American Clean Skies Foundation (ACSF) is a non-profit organization founded to advance America's energy independence and promote measures to achieve a cleaner environment through the expanded use of natural gas and renewable energy. ACSF appreciates the opportunity to comment on the Department of Energy's (DOE's) 2009 National Electric Transmission Congestion Study (Congestion Study).<sup>1</sup>

**A. Introduction**

Pursuant to the Energy Policy Act of 2005, DOE prepares a study of potential congestion problems to the nation's electric transmission system every three years and, pursuant to the American Reinvestment and Recovery Act of 2009, the current Congestion Study must include analysis of congestion restraints in the transmission of renewable sources of energy. Based on the Congestion Study, the Secretary of Energy may designate areas as national interest electric transmission corridors, which then may lead to further study on whether and how congestion should be alleviated. Also, Congress has given the Federal Energy Regulatory Commission (FERC) backstop authority to site transmission facilities in such corridors.<sup>2</sup>

Alleviating congestion by building new long-distance transmission involves significant costs and environmental impacts. Furthermore, decisions about how and where to build new transmission dictates what electric generation sources will gain access

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<sup>1</sup> The Notice of Availability of the Congestion Study was published in the Federal Register on April 30, 2010 (75 Fed. Reg. 22770). The Congestion Study and the Federal Register Notice can be found at <http://congestion09.anl.gov>.

<sup>2</sup> See e.g., Congestion Study, pp. vii and 25.

to transmission for decades to come. It is thus critical that DOE properly review congestion issues, to focus attention on where transmission resources are best applied, avoid an inappropriate use of the federal government's backstop siting authority, and recognize when a non-transmission alternative is preferable (such as locating generation closer to load centers and thus reducing the need for long-distance transmission).

In reviewing potential areas of congestion on the nation's electrical grid, it is also important that DOE consider the extent to which congestion may be due, in part, to the failure of current wholesale electricity prices to reflect the cost of greenhouse gas and other pollutants. In some cases, this may lead to a demand for transmission-based arbitrage between nominally lower-cost (*e.g.*, coal-fired) and higher-cost (*e.g.*, gas-fired) generation, which will disappear over time as new environmental regulations take effect.

In preparing this Congestion Study, DOE did not independently model or forecast future transmission congestion, but instead relied on the studies of others. Although these studies "reflect differing goals, analytical methods, data sources, and underlying assumptions and projections," DOE has "not attempted a systematic review to identify and explain the assumptions and projections used in these studies."<sup>3</sup> Assumptions regarding environmental costs and natural gas prices will significantly impact future generation choices, and hence transmission needs. Without examining such assumptions, DOE cannot truly assess whether its transmission findings are based on appropriate data. This is not adequate, particularly in light of a statutory mandate that requires DOE to explain its assumptions and projections.

## **B. Summary of Comments**

The Congestion Study rightfully focuses significant attention on the transmission needs of new renewable energy. ACSF recognizes the important role of electric transmission in achieving a lower-carbon economy, including as a means of bringing increased renewable energy to market.

However, based on the current Administration's commitment to a lower-carbon future and other environmental regulations, ACSF believes that transmission upgrades might be prioritized for lower-emitting generation (*e.g.*, renewable and natural gas) versus long-distance coal-by-wire. Furthermore, interconnection should be facilitated for generation that is located closer to load, such as combined heat and power facilities (which often use natural gas as their combustion fuel) and other natural gas generation.

Important issues regarding natural gas-fueled generation and transmission also must not be overlooked, and there is very little attention paid in the Congestion Study to the role of natural gas in the grid. More specifically, any consideration of transmission policy should recognize the following:

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<sup>3</sup> Congestion Study, p. 10.

- Newly abundant, clean-burning domestic natural gas will play an increasing role in our nation's power generation.
- Natural gas generation can significantly reduce transmission congestion as it can be located closer to electricity demand than other generation sources, thus reducing the need for long-distance transmission.
- Natural gas generation is a key mechanism for load-balancing intermittent renewables such as wind and solar.
- Transmission upgrades must avoid promoting coal-by-wire, which would lock in high-polluting coal-fired power for decades to come and worsen transmission congestion.

The Congestion Study also makes inaccurate comments regarding natural gas prices and price volatility that ACSF would like to correct. Significantly, the Congestion Study relies on data that is current only through May 2009. ASCF notes that important developments and learning since May 2009 should inform any future discussions of transmission build-out. Perhaps most importantly, recent natural gas production increases show that abundant gas supplies can provide a stable, low-cost source of this clean-burning fuel. The increased affordability of natural gas means that it is not necessary to import coal-by-wire over long distances, which reduces transmission congestion.

In order to address the above, and to close the gaps in the existing Congestion Study, ACSF strongly urges DOE to prepare an addendum that (1) carefully assesses the economic and environmental policy assumptions on which it relies, so that it does not build tomorrow's transmission for yesterday's electric generation sources; and (2) fully reflects the current state of natural gas supply in the U.S. and the scope this affords for expanded use of gas-fired power facilities.

In summary, both renewable and natural gas electric generation should be a central consideration in transmission issues and planning.

### **C. Comments**

#### **1. Newly abundant, clean-burning domestic natural gas will play an increasing role in our nation's power generation.**

Domestic natural gas production has experienced nothing short of a widely recognized revolution over the last two years. This revolution is due to recent production advances involving gas located in on-shore shale formations throughout the United States. Increased experience with drilling technologies now makes shale gas commercially accessible in significant volume. These vast, new shale-gas reserves have

been widely recognized as a “game changer” in U.S. energy supply. The U.S. Energy Information Agency (EIA), for instance, has said that shale gas enables growth in U.S. reserves, production and consumption, and reduces projected gas prices.<sup>4</sup> Natural gas resources now provide roughly a 100-year supply at current consumption levels.<sup>5</sup>

Furthermore, leading researchers and analysts have recognized the significance of new natural gas discoveries. For instance, the Massachusetts Institute of Technology has noted that “[a]bundant global natural gas resources imply greatly expanded natural gas use, with especially large growth in electricity generation” and that natural gas “will assume an increasing share of the U.S. energy mix over the next several decades, with the large unconventional resource playing a key role.”<sup>6</sup>

Similarly, IHS Cambridge Energy Research Associates (CERA) has found that new shale and other gas discoveries rank “as the most significant energy innovation so far this century—and one that, because of its scale, requires a reassessment of expectations for energy development.” CERA further notes that “[s]hale gas and other forms of unconventional natural gas...could allow the electric power industry to almost double its use of natural gas...by 2035.”<sup>7</sup>

**Abundant new natural gas supplies have reduced prices for natural gas.** Natural gas prices have fallen well below their 2008 peak and price volatility also should be reduced. The EIA projects that peak prices in 2008 generally will not be exceeded though 2035, and with rapid developments in shale gas technology prices would be even lower.<sup>8</sup> Shale gas drilling involves less risk and less lead-time than conventional natural gas drilling. As FERC has noted:

Not that long ago, it would take several months from the start of drilling to initial production. Average time-to-drill in 2009 was about 20 days. Nowadays, production is almost certain before drilling begins, and well efficiency increases as producers learn the particular nuances of a given play. Because shale production has many of the characteristics of gas in storage, companies have greater flexibility to produce gas when the market calls for it. Production can be deferred without risking the integrity of the well. Ending long production lead times and the risk of failure or

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<sup>4</sup> See EIA, *Shale Gas: A Game Changer for U.S. and Global Gas Markets?* (March 2010), p. 2, available at <http://www.eia.doe.gov/neic/speeches/newell030210.pdf>.

<sup>5</sup> FERC, *State of the Markets Report 2009* (April 15, 2010), p. 12, available at <http://www.ferc.gov/market-over-sight/st-mkt-ovr/som-rpt-2009.pdf>.

<sup>6</sup> FERC, *State of the Markets Report 2009* (April 15, 2010), p. 12, available at <http://www.ferc.gov/market-over-sight/st-mkt-ovr/som-rpt-2009.pdf>.

<sup>7</sup> *Id.* at p. ES-1.

<sup>8</sup> EIA, *2010 Annual Energy Outlook*, pp. 70-71, available at [http://www.eia.doe.gov/oiaf/aeo/pdf/0383\(2010\).pdf](http://www.eia.doe.gov/oiaf/aeo/pdf/0383(2010).pdf).

loss may dramatically temper the gas market's systemic boom-and-bust cycle.<sup>9</sup>

**Natural gas price volatility has also been reduced in a number of ways, above and beyond the beneficial impacts of these vast new reserves of natural gas.** Natural gas storage and pipeline transmission capacity recently has been enhanced, which further reduces the potential for price volatility.<sup>10</sup> This enhanced natural gas supply has significant implications for transmission because it opens up expanded possibilities for the use of clean-burning natural gas in the electric generation sector. Most significantly, high-efficiency natural gas combined cycle turbines can provide clean, base load generation, and in particular provide an alternative to coal plants which have significantly higher emissions of SO<sub>2</sub>, NO<sub>x</sub>, particulate matter, mercury and other pollutants.<sup>11</sup>

**Environmental policy developments will further accelerate fuel-switching to natural gas.** Climate policy provides incentives to switch to lower-carbon forms of generation, particularly renewables and natural gas. The Congestion Study itself recognizes that there is an increasing "national concern" with climate change.<sup>12</sup> The Obama Administration has repeatedly promoted a national policy of reducing greenhouse gas emissions, and Congress has considered multiple bills in this regard. Moreover, the U.S. EPA is actively moving forward with regulating greenhouse gases under its existing Clean Air Act authority. Virtually no informed observers think that power plants will avoid a carbon constraint within the next decade. This carbon constraint will increase renewable energy use and incentivize natural gas use.

Increasingly stringent regulation of conventional pollution also provide incentives to switch from coal to natural gas: e.g., tightening of national ambient air quality standards for sulfur dioxide, nitrogen oxides, particulate matter and ozone (smog); mercury regulation; regulations to address regional haze; as well as regulation of solid waste (coal ash) and cooling water regarding coal-fired power plants. Among other initiatives, ACSF has filed comments in support of EPA rules to address smog,

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<sup>9</sup> FERC, *State of the Markets Report 2009*, p. 10.

<sup>10</sup> *Id.* at pp. 11-13.

<sup>11</sup> For a discussion on the adverse impacts of coal versus natural gas generation, see e.g. the National Research Council, *Hidden Costs of Energy: Unpriced Consequences of Energy Production and Use* (2009). The National Research Council (NRC) is a private, nonprofit institution under the auspices of the National Academy of Sciences, Institute of Medicine, and National Academy of Engineering. In response to a request from the U.S. Congress, the NRC evaluated health, environmental, national security, and other external costs associated with energy. It found that damages per kilowatt-hour (kwh) from NO<sub>x</sub>, sulfur dioxide, and particulate matter emissions have been an order of magnitude higher for coal than for natural gas electric power plants: on average, approximately 3.2 cents per kwh for coal and only 0.16 cents per kwh for natural gas.

<sup>12</sup> Congestion Study, p. 13.

emphasizing how renewables and natural gas—in lieu of coal-fired generation—can reduce this pollution.<sup>13</sup>

**Existing natural gas power plants are currently underutilized.** Although natural gas is the largest source of existing electric power generation capacity, it trails coal and is underutilized as a source of generation. A recent Congressional Research Service (CRS) report focuses on the ability to increase generation at the existing fleet of high-efficiency natural gas combined cycle turbines, while decreasing generation at higher emitting coal plants.<sup>14</sup> CRS notes that if the utilization of these combustion turbines could be doubled, this would generate additional power equivalent to 32% of all coal-fired generation and displace about 19% of coal-fired CO<sub>2</sub> emissions.<sup>15</sup>

**In fact, increased use of natural gas for electric generation is already happening.** The EIA has recognized the increased potential for fuel-switching from coal to gas for generation.<sup>16</sup> Furthermore, FERC finds that gas demand for power generation increased 5.5 percent in calendar year 2009, even as overall electric demand fell.<sup>17</sup> Indeed, FERC says that a “new gas market paradigm emerged into clearer focus” in 2009.<sup>18</sup> This new paradigm involves lower natural gas prices, lower natural gas price volatility, and increased use of natural gas for electric generation. Accordingly, natural gas-fueled power was the leading type of electric sector capacity addition in 2009, followed by wind -- together, natural gas and wind accounted for 84% of capacity additions in 2009.<sup>19</sup>

**Some fuel-switching from coal to gas depends on transmission availability.** CRS found that a significant amount of this fuel switching could take place at existing, underutilized, modern gas plants located within 10 to 25 miles of existing coal plants, a distance where transmission issues may be minimal (since both the existing coal and gas plants could be using the same transmission network and thus be “transmission

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<sup>13</sup> See ACSF comments to the U.S. EPA available at <http://www.cleanskies.org/pdf/acsf-ozone-comments.pdf>.

<sup>14</sup> See CRS, *Displacing Coal with Generation from Existing Natural Gas-Fired Power Plants* (2010) (“CRS Report”), pp. 4 and 8, available at [http://assets.opencrs.com/rpts/R41027\\_20100119.pdf](http://assets.opencrs.com/rpts/R41027_20100119.pdf). CRS found that the existing fleet of high-efficiency natural gas combined cycle turbines had utilization rates around 42%, higher-emitting coal plants had utilization rates around 75%, based on 2007 data. It also found that gas constitutes 39% of electric generating capacity but only 21% of generation, while coal constitutes 31% of capacity but a higher 49% of generation.

<sup>15</sup> CRS Report, p. 9.

<sup>16</sup> See e.g., EIA, *The Implications of Lower Natural Gas Prices for the Electric Generation Mix in the Southeast* (May 2009), available at [http://www.eia.doe.gov/emeu/steo/pub/special/pdf/2009\\_sp\\_02.pdf](http://www.eia.doe.gov/emeu/steo/pub/special/pdf/2009_sp_02.pdf).

<sup>17</sup> FERC, *State of the Markets Report 2009*, pp. 3 and 5.

<sup>18</sup> *Id.* at p. 2.

<sup>19</sup> *Id.* at p. 9.

interchangeable”).<sup>20</sup> However, to the extent that comparatively minor transmission upgrades are necessary for such fuel-switching from coal to gas, it is essential that they take place, as these upgrades are likely to be much smaller and cost effective than for other generation sources (where more long-distance transmission may be needed).

**2. Natural gas generation can significantly reduce transmission congestion as it can be located closer to electricity demand, thus reducing the need for long-distance transmission.**

**Natural gas can reduce transmission congestion because of a unique attribute among significant sources of electric power generation: it is particularly well-suited to be located close to load.** Natural gas power causes less pollution and health impacts than other forms of fossil fuel (*e.g.*, coal, the other major source of fossil base-load generation), and thus can be located closer to population centers.

Natural gas plant siting also has certain flexibilities that renewables do not. The Congestion Study notes that a 250 MW concentrating solar plant would require nearly 3 square miles of land, and wind farms may involve thousands of acres.<sup>21</sup> Also, the siting of renewable resources is “dictated by nature” without consideration of where existing transmission may be located.<sup>22</sup> The flexibilities enjoyed by natural gas plants should be exploited to enhance the attractive environmental profiles inherent in renewable sources of electricity.

**Old, inefficient, high-emitting coal plants can be replaced at or near their existing locations with high-efficiency, low emitting natural gas plants without the need for significant new infrastructure upgrades.** The Congestion Study itself notes that natural gas lines can “deliver fuel to power plants in most locations in the lower 48 states.”<sup>23</sup> Furthermore, a recent analysis for EPA regulations for industrial, commercial boilers assumes that all such boilers have the capability to connect to natural gas.<sup>24</sup> CRS has noted that significant amounts of fuel-switching may take place from coal to gas power plants that are located within 25 miles of each other and may be “transmission interchangeable.”<sup>25</sup>

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<sup>20</sup> Existing natural gas plants within 25 miles of existing coal plants were estimated at being able to potentially reduce 9% of total U.S. coal generation and 5% of associated CO<sub>2</sub> emissions. CRS Report at p. 17.

<sup>21</sup> Congestion Study, p. 20.

<sup>22</sup> Congestion Study, p. 13.

<sup>23</sup> Congestion Study, p. 24.

<sup>24</sup> ERG, *Development of Fuel Switching Costs and Emission Reductions for Industrial, Commercial, and Institutional Boilers and Process Heaters National Emission Standards for Hazardous Air Pollutants* (April 2010), pp. 6-7, finding that the number of facilities where gas is not available for fuel-switching to natural gas is so “negligible” that it was assumed to be 0%.

<sup>25</sup> CRS Report p. 14-15.

**An often overlooked fact is that natural gas is a preferred fuel type for smaller-scale distributed generation.** The Congestion Study itself notes distributed generation as a key alternative to building new transmission; however, the Study fails to clearly recognize natural gas as a key distributed generation resource. Elsewhere, DOE has recognized that “[t]he primary fuel for many distributed generation systems is natural gas.”<sup>26</sup> And, of course, distributed generation is a key means for reducing transmission congestion.<sup>27</sup>

**3. Natural gas generation is a key mechanism for load-balancing intermittent renewables such as wind and solar.**

**ACSF recognizes the important and growing role of renewable energy in the nation’s energy supply mix; however, intermittent renewables require load-balancing.** The Congestion Study itself highlights the need for load balancing for new, large volumes of intermittent renewables coming on line.<sup>28</sup>

Natural gas is the logical energy source to provide this load-balancing. Unlike coal-fired plants, high-efficiency natural gas plants can quickly increase and decrease load generation. Coal, by contrast, is a particularly inefficient source of electricity when it is repeatedly ramped up and down, and the higher emissions profile of coal can cause significant pollution, contrary to environmental goals.<sup>29</sup> In short, the promise of emission reductions through renewable energy cannot be fully realized without natural gas load-balancing, and any transmission upgrades should take into account and prioritize the attractive load balancing attributes of natural gas.

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<sup>26</sup> DOE National Renewable Energy Laboratory, *Distributed Energy Resources Program*, available at <http://www.nrel.gov/docs/fy02osti/31251.pdf>.

<sup>27</sup> See e.g., Congestion Study, pp. viii, 40-42 (regarding distributed generation efforts in PJM), 56 (noting the reduction in New England congestion due to distributed generation), 79-85 (regarding substantial distributed generation efforts in California), and 95 (“The cumulative effect of these and similar energy efficiency, demand response, and distributed generation measures indicate that the utilities, policymakers and communities of the Phoenix-Tucson area are now working to manage and limit loads through customer-oriented, non-wires solutions).

<sup>28</sup> See e.g., Congestion Study p. 44, referencing the need to study how “significant increases in variable generation can be incorporated reliably into the Eastern grid.”

<sup>29</sup> For instance, studies have shown that renewable energy actually increases pollution of NOx, SO2—and even carbon dioxide—if coal-fired power plants provide load-balancing. See BenteK Energy LLC, *How Less Became More: Wind, Power and Unintended Consequences in the Colorado Energy Market* (April 16, 2010), pp. 73-74. This report find that unless states with Renewable Portfolio Standards (RPS) have a sufficient cushion of natural gas generation, imposition of an RPS standard greater than 5% will probably increase emissions of CO2, NOx and SO2. *Id.* at p. 76.



**4. Transmission upgrades must avoid promoting coal-by-wire, which would lock in high-polluting coal-fired power for decades to come and worsen transmission congestion.**

**Coal-by-wire across long-distances is not an answer to relieving congestion.**

Coal-by-wire worsens transmission congestion by trying to transport electricity over long-distances from coal-fired power to distant demand centers. Also, building out this new coal-by-wire transmission itself involves significant impacts, as forests are cleared, vistas impaired, and property values harmed. Unfortunately, such projects are still occurring. For instance, the Congestion Study finds that a number of new transmission projects have been proposed in the Western U.S. “specifically...to bring new renewable and *coal-fired generation to market*.”<sup>30</sup>

The country cannot build its way out of transmission congestion by facilitating more coal-by-wire. For instance, in the mid-Atlantic, the Congestion Study notes a “major west-to-east problem” on the grid. This problem is caused in large part by trying to import coal-fired power from these areas to the west. The Congestion Study notes that “if only a single key constraint is eased, another will emerge.”<sup>31</sup> Additionally, the environmental impacts of a massive transmission build-out would be significant. As some opponents of massive transmission build-out have noted, we would live under an “aluminum sky” of high-voltage lines crossing the nation.<sup>32</sup>

**The looming retirements of massive amounts of coal-fired generation only increase the need to consider natural gas plants as part of any transmission needs.**

The Congestion Study mentions various power plant “retirements,” but does not focus on the significant issue at hand: that old, low-efficiency, high-emitting coal plants will be (and should be) retired. As noted above, the need to reduce greenhouse gas emissions, as well as ongoing regulatory efforts by the U.S. EPA to address our nation’s persistent problems with air pollutants such as SO<sub>2</sub>, NO<sub>x</sub>, particulate matter and mercury, are driving many of these coal-fired power plant retirements. Other environmental rules may have similar effects. For instance, the Congestion Study also mentions that Clean Water Act once-through cooling rules could mean that 21 older power plants in California may have to “undergo costly modifications, be shut down, or be replaced.”<sup>33</sup>

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<sup>30</sup> Congestion Study, p. 73.

<sup>31</sup> Congestion Study, p. 48.

<sup>32</sup> Miller, “The Future of the Grid,” Testimony to U.S. House of Representatives, 2009, quoted in Peter Fox-Penner, *Climate Change, the Smart Grid and the Future of Electric Utilities* (Island Press, 2010), p. 80.

<sup>33</sup> Congestion Study, p. 80.

**5. The Congestion Study makes inaccurate statements regarding natural gas price volatility that should be corrected.**

The Congestion Study's assertion that high natural gas prices are a congestion problem fails to recognize that natural gas prices have dropped and are projected to stay low for at least as far out as the EIA projections go.

The Congestion Study relies on data that is current only through May 2009. **ASCF notes that important developments regarding natural gas since then should inform any future discussions of transmission build-out.** For instance, as noted above, recent shale discoveries continue to show that abundant natural gas supplies can provide a stable, low-cost source of clean-burning natural gas. Moreover, the Congestion Study makes certain materially inaccurate statements with respect to natural gas that should be corrected.

The Congestion Study says that the “cost and price volatility of oil, coal and natural gas” has made renewable energy more desirable as a price hedge and contributor to national energy security.<sup>34</sup> However, natural gas price volatility very likely has been reduced, and natural gas, which is a domestic resource, has a crucial role to play regarding the nation's energy security and low-carbon future. EIA's own projections show that 2008 natural gas prices will not be exceeded through 2030. Moreover, EIA data shows that almost all of our nation's natural gas is produced domestically, which stands in stark contrast to our nation's reliance on foreign oil for most of our petroleum needs.<sup>35</sup>

The Congestion Study also inaccurately refers to the mid-Atlantic region's high dependence upon costly and “price volatile” oil and gas generation as a transmission congestion-related issue.<sup>36</sup> Any discussion of volatility must distinguish natural gas from oil. Although “oil and gas” are often mentioned together, the two fuels are quite different. Most of our oil is imported with the significant involvement of large multinationals. By comparison, most of our natural gas is produced domestically. Furthermore, much of the gas is produced by smaller, independent companies, onshore, through increasingly well-known and understood natural gas drilling technologies. Additionally, as an economic matter, in the United States, oil and gas pricing are generally “decoupled” and don't move in tandem; U.S. natural gas prices have limited sensitivity to oil prices.<sup>37</sup> Thus, oil price volatility must be understood as distinct from natural gas pricing, particularly because the new, long-term abundance of natural gas has reduced gas prices and volatility.

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<sup>34</sup> Congestion Study, p. 12.

<sup>35</sup> EIA, *2010 Annual Energy Outlook*, pp. 74 and 77.

<sup>36</sup> Congestion Study, p. 38.

<sup>37</sup> *Id.* at 71.

**6. The transmission needs of natural gas should be carefully considered in the planning and implementation of regional and national transmission infrastructure.**

The Congestion Study provides an overview of congestion issues, but gives insufficient attention to the role that natural gas can play in reducing transmission congestion, as well as the specific transmission needs of new natural gas generation.

Consideration of the transmission benefits and needs of natural gas generation should be central to the transmission planning process. For instance, DOE noted in the Congestion Study that it will fund additional analysis on regional or sub-regional renewable integration studies, including how higher levels of renewable generation could be used in “in combination with other generation sources.”<sup>38</sup> Obviously, natural gas generation for load-balancing must be a key part of such analysis. But it is also important that natural gas be a central focus in any broader transmission planning processes. For instance, FERC has recently issued a Notice of Proposed Rulemaking to enhance regional transmission planning; natural gas generation should be central to such planning.<sup>39</sup> Furthermore, some long-distance transmission for renewables may qualify for beneficial cost-recovery to facilitate its construction. If natural gas provides the load-balancing for such renewables, the transmission for that natural gas should also get similar, beneficial cost recovery.

At a minimum, transmission upgrades might be prioritized for lower-emitting generation (e.g., renewable and natural gas) versus long-distance coal-by-wire. The Congestion Study mentions that California has established standardized interconnection terms and feed-in tariffs for non-solar distributed generation and “a similar program for combined heat and power facilities” (CHP).<sup>40</sup> ACSF supports the use of facilitating interconnection for CHP facilities (which often use natural gas as their combustion fuel) and suggests that similar methods for facilitating interconnection should be considered for other natural gas generation.

**D. Concluding Remarks and Request**

The role of natural gas generation as a solution to transmission issues has often been overlooked, and is not given sufficient discussion in the Congestion Study. ACSF strongly recommends that any planning for transmission systems—both on the regional and national level—should carefully take into account the benefits of natural gas and its increasing role in power generation, including its role in providing base load generation,

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<sup>38</sup> Congestion Study, p. 102.

<sup>39</sup> See the FERC Notice of Proposed Rulemaking, *Transmission Planning and Cost Allocation by Transmission*

*Owning and Operating Public Utilities* (issued June 17, 2010), available at <http://www.ferc.gov/whats-new/comm-meet/2010/061710/E-9.pdf>.

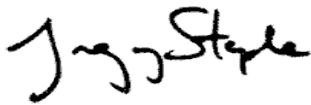
<sup>40</sup> Congestion Study, p. 80.

load-balancing for renewable energy sources, distributed generation and combined heat and power.

ACSF strongly recommends that DOE (1) carefully assess the economic and environmental policy assumptions on which it relies, so that it does not build tomorrow's transmission for yesterday's electric generation sources; and, (2) fully reflect the current state of natural gas supply and the scope this affords for expanded use of gas-fired power facilities.

ACSF would be happy to further discuss transmission planning issues with DOE in order to help promote environmentally sound generation sources and reduce transmission congestion.

Sincerely,

A handwritten signature in black ink, appearing to read "Gregory C. Staple". The signature is fluid and cursive, with the first name "Gregory" written in a more stylized, connected manner.

Gregory C. Staple  
Chief Executive Officer  
American Clean Skies Foundation